PRELIMINARY REPORT
INDUSTRY SERIES

1982 Census of Mineral Industries

MIC82-I-14D(P)
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CHEMICAL AND FERTILIZER MINERAL MINING
(Industries 1472, 1473, 1474, 1475, 1476, 1477, and 1479)

This report presents preliminary statistics from the 1982 Census of Mineral Industries. The 1982 data are subject to change in the final reports, which will be issued at a later date. Final data will be presented first in paperbound reports and then in a bound volume of Subject, Industry, and Geographic Area Statistics. The final volume will include a comprehensive discussion of the concepts and definitions used in the census.

The total value of shipments and receipts for Industry 1472, Barite, was $116 million in 1982, while the value of shipments of products classified as being primary to this industry was $94 million. Value added by mining was $82 million. Total employment for the industry increased to 1.2 thousand employees in 1982, an increase of approximately 50 percent from 1977. Establishments in this industry are those primarily engaged in mining, milling, grinding, or otherwise preparing crude barite. Establishments primarily engaged in milling, grinding, or otherwise preparing barite not in conjunction with mining or quarrying operations are classified in manufacturing Industry 3295, Minerals and Earths, Ground or Otherwise Treated.

The total value of shipments and receipts for Industry 1473, Fluorspar, was $19 million in 1982, while the value of shipments of products classified as being primary to this industry was $18 million. Value added by mining was $11 million. Total employment for the industry decreased to .3 thousand employees in 1982, a decrease of approximately 57 percent from 1977. Establishments in this industry are those primarily engaged in mining, milling, or otherwise preparing fluorspar.

The total value of shipments and receipts for Industry 1474, Potash, Soda, and Borate Minerals, was $1,289 million in 1982, while the value of shipments of products classified as being primary to this industry was $1,240 million. Value added by mining was $957 million. Total employment for the industry increased to 9.9 thousand employees in 1982, an increase of approximately 5 percent from 1977. Establishments in this industry are those primarily engaged in mining, milling, or otherwise preparing natural potassium, sodium, or boron compounds (other than common salt). Products of the industry include potash salts, sodium borates, sodium carbonates, sodium sulfates, and colemanite, a calcium borate. Dry lake brine operations are included in this industry as well as establishments engaged in producing the specified minerals from underground and open pit mines.

U.S. Department of Commerce
BUREAU OF THE CENSUS

For sale by Superintendent of Documents, U.S. Government Printing Office, Washington, D.C. 20402.

The total value of shipments and receipts for Industry 1475, Phosphate Rock, was $1,052 million in 1982, while the value of shipments of products classified as being primary to this industry was $1,050 million. Value added by mining was $734 million. Total employment for the industry decreased to 6.9 thousand employees in 1982, a decrease of approximately 10 percent from 1977. Establishments in this industry are those primarily engaged in mining, milling, drying, calcining, sintering, or otherwise preparing phosphate rock, including apatite. Establishments primarily engaged in the production of phosphoric acid, superphosphates, or other manufactured phosphate compounds or chemicals are classified in Major Group 28, Chemicals and Allied Products.

The total value of shipments and receipts for Industry 1476, Rock Salt, was $180 million in 1982, while the value of shipments of products classified as being primary to this industry was $174 million. Value added by mining was $146 million. Total employment for the industry decreased to 2.5 thousand employees in 1982, a decrease of approximately 7 percent from 1977. Establishments in this industry are those primarily engaged in mining, crushing, screening, or otherwise preparing rock salt. Establishments primarily engaged in producing salt from natural or artificial brines are classified in manufacturing Industry 2899, Chemicals and Chemical Preparations, N.E.C.

The total value of shipments and receipts for Industry 1477, Sulfur, was $442 million in 1982, while the value of shipments of products classified as being primary to this industry was $433 million. Value added by mining was $289 million. Total employment for the industry decreased to 2.3 thousand employees in 1982, a decrease of approximately 15 percent from 1977. Establishments in this industry are those primarily engaged in mining native sulfur, including the extraction of native sulfur at well operations, and mining and beneficiating sulfur ore. Establishments primarily engaged in mining, preparing to mine, or concentrating pyrites are classified in Industry 1479, Chemical and Fertilizer Mineral Mining, N.E.C. Establishments primarily engaged in recovering elemental sulfur from natural gas are classified in manufacturing Industry 2819, Inorganic Chemicals, N.E.C.

The total value of shipments and receipts for Industry 1479, Chemical and Fertilizer Mineral Mining, N.E.C., was $41 million in 1982, while the value of shipments of products classified as being primary to this industry was $45 million. Value added by mining was $23 million. Total employment for the industry increased to .5 thousand employees in 1982, an increase of approximately 67 percent from 1977. Establishments in this industry are those primarily engaged in mining, milling, or otherwise preparing chemical or fertilizer mineral raw materials, not elsewhere classified, such as arsenic minerals, guano, lithium minerals, mineral pigments, pyrites, and strontium minerals.

Establishment data were tabulated based on industry definitions contained in the 1972 Standard Industrial Classification (SIC) Manual and its 1977 supplement.[1] The industry statistics (employment, payroll, value of shipments and receipts, cost of supplies, etc.) are reported for each establishment as a whole. Industry aggregates of these data measure not only the primary activities of the establishments, which determine their industry classification, but also all secondary activities performed by the same establishments. This fact should be taken into account in comparing industry statistics (tables 1, 2, 4a, and 4b) with product statistics (table 3) showing shipments by all industries of the primary products of the specified industry. (See appendix for a discussion of the difference between value of shipments and receipts for the industry and value of product shipments.) All dollar figures shown in this report are in current dollars for the years specified and have not been adjusted for changes in price levels. Therefore, when making comparisons to prior years, users should take into consideration the inflation that has occurred.

The methods of data collection which include the use of administrative-record data are discussed in detail in the appendix. Small single-unit companies (the cutoff varied by industry) were not mailed a questionnaire. For these establishments (and a small number of larger establishments whose reports were not received at the time of tabulation), some employment, payroll, and receipt data were obtained from administrative records of other government agencies. These data were then used in conjunction with industry averages to estimate the statistics for the administrative-record and nonresponse establishments.

Single-unit establishments in the barite industry with less than 5 employees were not mailed questionnaires; for the fluorspar industry this cutoff was 8 employees; for the potash, soda, and borate minerals industry it was 9 employees; for the phosphate rock industry it was 5 employees; for the rock salt industry it was 11 employees; for the sulfur industry it was 6 employees; and for the chemical and fertilizer mineral mining, n.e.c., industry it was 2 employees. These establishments in the barite industry accounted for 1 percent of the total value of shipments and receipts; in the fluorspar industry they accounted for 3 percent; in the potash, soda, and borate minerals industry they accounted for less than 1 percent; in the phosphate rock industry they accounted for less than 1 percent; in the rock salt industry they accounted for 1 percent; in the sulfur industry they accounted for less than 1 percent; and in the chemical and fertilizer mineral mining, n.e.c., industry they accounted for less than 1 percent.

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The following abbreviations and symbols are used in the tables in this publication:

-	Represents zero.
(D)	Withheld to avoid disclosing data for individual companies.
(NA)	Not available.
(S)	Withheld because estimate did not meet publication standards on the basis of either the response rate or a consistency review.
(X)	Not applicable.
(Z)	Less than half the unit shown.
n.e.c.	Not elsewhere classified.
n.s.k.	Not specified by kind.
r	Revised.
SIC	Standard Industrial Classification.

Other abbreviations, such as lb, gal, yd, and bbl, are used in the customary sense. Where the term "tons" only is used, it refers to short tons of 2,000 pounds; where the figures are expressed in tons of 2,240 pounds, the unit of measure is specified as "long tons" or "l. tons."

[1]Standard Industrial Classification Manual: 1972. For sale by Superintendent of Documents, U.S. Government Printing Office, Washington, D.C. 20402. Stock No. 041-001-00066-6. 1977 Supplement. Stock No. 003-005-00176-0.

Table 1. **Historical Industry Statistics: 1982 and Earlier Years**

(For meaning of abbreviations and symbols, see introductory text. For explanation of terms, see appendix)

Year	Companies (number)	Establishments during year: Total (number)	Establishments during year: With 20 employees or more (number)	All employees: Number (1,000)	All employees: Payroll (million dollars)	Production, development, and exploration workers: Number (1,000)	Production, development, and exploration workers: Hours (millions)	Production, development, and exploration workers: Wages (million dollars)	Value added by mining (million dollars)	Cost of supplies used, purchased machinery installed, etc. (million dollars)	Value of shipments and receipts (million dollars)	Value of net shipments and receipts[1] (million dollars)	Quantity of primary products[2]	Capital expenditures (million dollars)
INDUSTRY GROUP 147, CHEMICAL AND FERTILIZER MINERAL MINING														
1982[3]	130	183	104	24.0	602.5	16.6	34.2	396.4	2 241.8	1 417.4	3 139.6	3 018.2	(X)	519.4
1977[3]	137	205	112	24.3	371.6	17.6	37.3	248.7	1 433.3	1 011.3	2 167.2	2 032.7	(X)	277.4
1972[3]	124	204	110	19.9	202.8	13.9	29.4	126.8	582.5	289.8	783.6	749.5	(X)	88.7
1967[3]	(NA)	233	130	23.7	188.1	15.9	34.5	113.5	740.8	300.1	909.7	846.5	(X)	131.3
1963	177	235	106	21.0	137.1	14.6	31.2	85.7	443.5	203.6	587.1	536.8	(X)	60.0
1958	201	264	102	21.9	120.6	15.9	31.0	78.3	337.3	172.7	470.7	433.6	(X)	39.3
INDUSTRY 1472, BARITE														
1982[3]	32	40	14	1.2	24.2	1.0	2.2	20.5	81.7	62.0	116.4	(D)	2 252.0	27.2
1977[3]	28	33	12	.8	9.6	.7	1.5	7.9	45.0	16.2	57.6	57.6	1 141.2	3.6
1972[3]	21	27	12	.8	5.4	.7	1.4	4.5	19.6	4.4	22.4	22.3	843.4	1.5
1967[3]	(NA)	30	10	.9	4.7	.8	1.6	3.9	15.3	5.6	19.6	19.6	959.6	1.2
1963	45	54	13	1.4	6.8	.9	1.9	3.6	11.1	6.7	16.7	16.5	832.0	1.1
1958	41	53	8	1.2	5.2	.8	1.6	2.7	11.3	3.4	13.8	[4]13.4	603.0	1.0
INDUSTRY 1473, FLUORSPAR														
1982[3]	8	8	3	.3	5.6	.2	.5	3.9	10.9	(D)	18.8	(D)	(NA)	(D)
1977[3]	18	21	6	.7	8.7	.5	1.1	5.3	12.7	(D)	35.1	(D)	404.6	(D)
1972[3]	28	38	10	.8	7.9	.7	1.6	6.4	16.3	15.1	28.6	(D)	(NA)	2.7
1967[3]	(NA)	32	9	.7	4.7	.6	1.3	3.7	11.0	9.7	19.6	(D)	829.4	1.1
1963	28	30	7	.8	4.0	.7	1.3	3.0	8.9	7.2	15.8	12.3	595.0	.3
1958	50	55	11	1.2	5.6	1.0	2.1	4.3	12.7	8.9	20.0	16.6	836.0	1.6
INDUSTRY 1474, POTASH, SODA, AND BORATE MINERALS														
1982[3]	23	32	25	9.9	282.0	7.2	14.6	192.0	957.0	566.0	1 289.1	1 260.0	12 511.1	233.8
1977[3]	23	31	25	9.4	151.8	6.9	14.3	104.2	562.8	426.6	816.5	(D)	13 087.8	172.9
1972[3]	23	31	23	6.9	77.3	4.8	10.2	48.6	211.1	109.1	261.5	(D)	(NA)	58.6
1967[3]	(NA)	33	28	7.9	67.8	5.1	10.7	41.4	187.7	71.0	215.7	(D)	8 795.5	43.0
1963	19	23	16	7.1	51.9	4.8	9.8	32.9	156.2	62.7	192.1	(D)	6 870.0	26.8
1958	18	21	14	6.7	41.1	4.6	9.2	26.7	111.1	41.4	141.1	(D)	[5]5 544.0	11.4
INDUSTRY 1475, PHOSPHATE ROCK														
1982[3]	33	45	29	6.9	152.2	4.8	9.4	99.0	733.8	541.9	1 052.2	(D)	35.4	223.5
1977[3]	31	50	33	7.7	104.7	5.9	12.7	79.1	439.7	384.6	751.2	(D)	43.7	73.1
1972[3]	33	47	24	5.9	52.8	4.1	8.7	33.4	153.6	113.0	250.7	(D)	35.6	15.9
1967[3]	(NA)	69	41	8.1	59.6	5.4	12.0	35.3	199.3	145.0	296.6	244.5	36.2	47.7
1963	43	66	39	5.6	32.0	4.0	9.0	20.6	105.1	89.0	171.9	130.3	23.3	22.2
1958	43	65	37	5.4	27.2	4.0	8.3	17.2	64.4	73.4	132.1	99.1	17.5	5.7
INDUSTRY 1476, ROCK SALT														
1982[3]	15	27	16	2.5	56.2	1.7	3.9	36.9	146.0	53.2	180.0	(D)	17 793.5	19.2
1977[3]	20	31	16	2.7	38.1	2.0	4.5	26.9	135.4	38.8	159.8	159.8	17 104.0	14.3
1972[3]	16	30	19	2.7	26.2	2.1	4.4	18.1	74.1	19.4	86.5	81.9	14 456.5	7.0
1967[3]	(NA)	26	18	2.6	19.3	1.9	4.4	13.0	70.9	17.7	81.3	(D)	11 747.8	7.3
1963	20	25	15	2.4	16.0	1.8	4.3	11.1	49.5	17.2	59.3	58.6	[6]8 769.0	7.4
1958	18	22	12	2.0	11.0	1.6	3.5	7.9	34.1	10.3	41.8	(D)	[6]5 445.0	2.6
INDUSTRY 1477, SULFUR														
1982[3]	6	18	13	2.3	71.2	1.3	2.8	37.2	289.2	160.3	442.2	(D)	5 588.3	7.3
1977[3]	6	28	18	2.7	54.0	1.3	2.7	22.3	234.5	110.3	334.6	334.6	5 572.3	10.2
1972[3]	7	24	19	2.6	31.8	1.4	2.9	14.8	104.2	25.4	127.7	127.7	7 162.4	1.8
1967[3]	(NA)	31	21	3.2	30.5	1.8	4.0	15.1	253.2	48.3	271.2	271.2	7 607.3	30.3
1963	11	17	10	2.6	20.6	1.6	3.3	10.6	100.3	13.8	113.1	113.1	4 923.0	15.1
1958	14	24	13	3.7	24.6	2.3	4.6	13.3	94.1	28.4	106.2	106.2	4 619.0	16.3

See footnotes at end of table.

Table 1. Historical Industry Statistics: 1982 and Earlier Years – Con.

(For meaning of abbreviations and symbols, see introductory text. For explanation of terms, see appendix)

Year	Companies (number)	Establishments during year: Total (number)	Establishments during year: With 20 employees or more (number)	All employees: Number (1,000)	All employees: Payroll (million dollars)	Production, development, and exploration workers: Number (1,000)	Production, development, and exploration workers: Hours (millions)	Production, development, and exploration workers: Wages (million dollars)	Value added by mining (million dollars)	Cost of supplies used, purchased machinery installed, etc. (million dollars)	Value of shipments and receipts (million dollars)	Value of net shipments and receipts[1] (million dollars)	Quantity of primary products[2]	Capital expenditures (million dollars)
	INDUSTRY 1479, CHEMICAL AND FERTILIZER MINERAL MINING, N.E.C.													
1982[3]	13	13	4	.5	11.1	.4	.8	6.9	23.2	(D)	40.9	(D)	(X)	(D)
1977[3]	11	11	2	.3	4.6	.2	.5	2.9	3.1	(D)	12.3	(D)	(X)	(D)
1972[3]	7	7	3	.2	1.4	.1	.3	1.0	3.6	3.5	6.1	5.0	(X)	1.0
1967[3]	(NA)	12	3	.3	1.6	.2	.4	1.1	3.4	2.9	5.6	(D)	(X)	.7
1963	19	20	6	1.1	6.0	.8	1.6	3.8	12.4	7.0	18.3	(D)	(X)	1.1
1958	22	24	7	2.0	7.8	1.6	2.6	6.1	9.7	6.8	15.8	(D)	(X)	.7

[1]Represents gross shipments less minerals received from other establishments for preparation and value of resales. For service industries, represents total receipts less value of resales.

[2]Represents product indicated by the industry title and, in general, represents net shipments. For fluorspar, represents gross production of crude fluorspar in 1,000 short tons; for sulfur, 1,000 long tons; for phosphate rock, million short tons; and for all other products, 1,000 short tons.

[3]Beginning with 1967, data for single-unit establishments without paid employees were excluded from the census.

[4]Represents value of net shipments of primary products only.

[5]Includes shipments by industries other than potash, soda, and borate minerals, amounting to less than 1 percent of total.

[6]Includes shipments by industries other than rock salt amounting to less than 10 percent of total.

Table 2. Industry Statistics for Selected States and Type of Operation: 1982 and 1977

(For meaning of abbreviations and symbols, see introductory text. For explanation of terms, see appendix)

Industry, geographic area, and type of operation	1982: E[1]	1982: Establishments during year: Total (number)	1982: Establishments during year: With 20 employees or more (number)	1982: All employees: Number[2] (1,000)	1982: All employees: Payroll (million dollars)	1982: Production, development, and exploration workers: Number (1,000)	1982: Production, development, and exploration workers: Hours (millions)	1982: Production, development, and exploration workers: Wages (million dollars)	1982: Value added by mining (million dollars)	1982: Cost of supplies used, purchased machinery installed, etc. (million dollars)	1982: Value of shipments and receipts (million dollars)	1982: Capital expenditures (million dollars)	1977: All employees[2] (1,000)	1977: Value added by mining (million dollars)
INDUSTRY 1472, BARITE														
Geographic Area														
United States.	-	40	14	1.2	24.2	1.0	2.2	20.5	81.7	62.0	116.4	27.2	.8	45.0
Colorado	-	2	1	BB	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(NA)	(NA)
Georgia	-	2	2	AA	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(NA)	(NA)
Missouri	-	10	4	AA	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	.2	5.8
Nevada	-	15	6	CC	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	BB	(D)
Type of Operation														
Producing establishments	-	38	14	EE	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	CC	(D)
Mines only	E3	20	1	AA	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	AA	(D)
Open pit	E3	20	1	AA	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	AA	(D)
Mines with preparation plants	-	18	13	1.0	21.8	.9	2.0	18.2	77.0	57.0	107.8	26.2	.6	41.5
Open pit	-	18	13	1.0	21.8	.9	2.0	18.2	77.0	57.0	107.8	26.2	BB	(D)
INDUSTRY 1473, FLUORSPAR														
Geographic Area														
United States.	-	8	3	.3	5.6	.2	.5	3.9	10.9	(D)	18.8	(D)	.7	12.7
Illinois	-	2	1	AA	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	BB	(D)
Type of Operation														
Producing establishments	-	8	3	.3	5.6	.2	.5	3.9	10.9	(D)	18.8	(D)	CC	(D)
Mines with preparation plants	-	2	2	AA	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	CC	(D)
Underground	-	2	2	AA	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	CC	(D)

See footnotes at end of table.

Table 2. Industry Statistics for Selected States and Type of Operation: 1982 and 1977—Con.

(For meaning of abbreviations and symbols, see introductory text. For explanation of terms, see appendix)

Industry, geographic area, and type of operation	1982											1977	
		Establishments during year		All employees		Production, development, and exploration workers							
	E[1]	Total (number)	With 20 employees or more (number)	Number[2] (1,000)	Payroll (million dollars)	Number (1,000)	Hours (millions)	Wages (million dollars)	Value added by mining (million dollars)	Cost of supplies used, purchased machinery installed, etc. (million dollars)	Value of shipments and receipts (million dollars)	Capital expenditures (million dollars)	All employees[2] (1,000)	Value added by mining (million dollars)
INDUSTRY 1474, POTASH, SODA, AND BORATE MINERALS														
Geographic Area														
United States.	-	32	25	9.9	282.0	7.2	14.6	192.0	957.0	566.0	1 289.1	233.8	9.4	562.8
California.....	-	7	6	FF	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	EE	(D)
Nevada.....	-	2	2	AA	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(NA)	(NA)
New Mexico.....	-	7	7	2.6	66.1	2.0	3.9	45.2	117.1	109.6	203.9	22.8	FF	(D)
Texas.....	-	3	2	AA	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	AA	(D)
Utah.....	-	3	3	CC	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	.5	22.0
Wyoming.....	-	6	5	FF	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	FF	(D)
Type of Operation														
Producing establishments.....	-	32	25	9.9	282.0	7.2	14.6	192.0	957.0	566.0	1 289.1	233.8	FF	(D)
Mines only.....	-	1	1	AA	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	-	-
Underground.....	-	1	1	AA	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	-	-
Mines with preparation plants.....	-	28	21	FF	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	FF	(D)
Underground.....	-	12	12	6.6	191.0	4.7	9.1	126.6	525.7	324.7	667.4	173.1	6.5	339.7
Open pit.....	-	7	1	EE	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	EE	(D)
Combination and other mining methods.....	-	9	8	1.9	50.3	1.3	3.1	34.6	172.0	140.9	270.4	42.5	EE	(D)
Separately operated preparation plants.	-	2	2	AA	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)
INDUSTRY 1475, PHOSPHATE ROCK														
Geographic Area														
United States.	-	45	29	6.9	152.2	4.8	9.4	99.0	733.8	541.9	1 052.2	223.5	7.7	439.7
Florida.....	-	28	17	FF	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	FF	(D)
Idaho.....	-	4	4	BB	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	BB	(D)
Montana.....	-	1	1	AA	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	AA	(D)
North Carolina.....	-	2	2	BB	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	BB	(D)
Tennessee.....	-	3	2	BB	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	BB	(D)
Utah.....	-	2	1	AA	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(NA)	(NA)
Type of Operation														
Producing establishments.....	-	39	27	6.7	148.8	4.7	9.3	98.6	715.5	540.6	1 052.2	203.9	FF	(D)
Mines only.	E[1]	9	2	.2	4.3	.1	.2	3.0	7.1	5.5	12.1	.5	BB	(D)
Underground.....	-	1	1	AA	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	AA	(D)
Mines with preparation plants.....	-	26	23	6.4	141.7	4.5	8.9	93.4	698.7	509.6	1 006.9	201.4	6.9	395.4
Open pit.....	-	23	20	FF	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)
Combination and other.....	-	2	2	BB	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	-	-
Separately operated preparation plants.	-	3	2	AA	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	.4	15.4
Nonproducing establishments.	-	6	2	.1	3.2	(Z)	.1	.5	18.3	1.3	-	19.6	(D)	(D)
INDUSTRY 1476, ROCK SALT														
Geographic Area														
United States.	-	27	16	2.5	56.2	1.7	3.9	36.9	146.0	53.2	180.0	19.2	2.7	135.4
Louisiana.....	-	7	5	CC	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	EE	(D)
Michigan.....	-	1	1	AA	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	AA	(D)
New York.....	-	2	2	BB	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	CC	(D)
Ohio.....	-	2	2	CC	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	BB	(D)
Pennsylvania.....	-	1	1	AA	(D)	-	-	-	-	-	-	-	(NA)	(NA)
Texas.....	-	3	2	AA	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	AA	(D)
Type of Operation														
Producing establishments.....	-	27	16	2.5	56.2	1.7	3.9	36.9	146.0	53.2	180.0	19.2	2.7	135.4
Mines with preparation plants.....	-	12	12	2.0	46.1	1.6	3.7	34.7	138.8	47.4	167.8	18.4	2.4	124.8
Underground.....	-	12	12	2.0	46.1	1.6	3.7	34.7	138.8	47.4	167.8	18.4	EE	(D)
Undistributed[3].....	-	4	3	.4	7.4	-	-	-	-	-	-	-	.3	-

See footnotes at end of table.

Table 2. Industry Statistics for Selected States and Type of Operation: 1982 and 1977—Con.

(For meaning of abbreviations and symbols, see introductory text. For explanation of terms, see appendix)

Industry, geographic area, and type of operation	1982											1977	
		Establishments during year		All employees		Production, development, and exploration workers							
	E[1]	Total (number)	With 20 employees or more (number)	Number[2] (1,000)	Payroll (million dollars)	Number (1,000)	Hours (millions)	Wages (million dollars)	Value added by mining (million dollars)	Cost of supplies used, purchased machinery installed, etc. (million dollars)	Value of shipments and receipts (million dollars)	Capital expenditures (million dollars)	All employees[2] (1,000)	Value added by mining (million dollars)
INDUSTRY 1477, SULFUR													
Geographic Area													
United States.	-	18	13	2.3	71.2	1.3	2.8	37.2	289.2	160.3	442.2	7.3	2.7	234.5
Connecticut.....	-	1	1	AA	(D)	-	-	-	-	-	-	-	AA	(D)
Louisiana.....	-	7	5	CC	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	CC	(D)
Texas.....	-	8	7	EE	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	EE	(D)
Type of Operation														
Producing establishments.....	-	17	13	EE	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	FF	(D)
Mines only.....	-	6	5	EE	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	EE	(D)
Combination and other mining methods.....	-	5	5	EE	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	EE	(D)
Mines with preparation plants.....	-	4	4	BB	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)
Combination and other mining methods.....	-	4	4	BB	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	-	-
Undistributed[3].....	-	7	4	CC	(D)	-	-	-	-	-	-	-	EE	(D)
INDUSTRY 1479, CHEMICAL AND FERTILIZER MINERAL MINING, N.E.C.														
Geographic Area														
United States.	-	13	4	.5	11.1	.4	.8	6.9	23.2	(D)	40.9	(D)	.3	3.1
New York.....	-	1	1	AA	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(NA)	(NA)
North Carolina.....	-	2	2	BB	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	BB	(D)
Type of Operation														
Producing establishments.....	-	13	4	.5	11.1	.4	.8	6.9	23.2	(D)	40.9	(D)	BB	(D)
Mines only.....	E[2]	9	1	.2	3.7	.1	.3	2.3	7.3	(D)	11.7	(D)	(Z)	.4
Open pit.....	E[2]	9	1	.2	3.7	.1	.3	2.3	7.3	(D)	11.7	(D)	(Z)	.4
Mines with preparation plants.....	-	3	3	BB	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	BB	(D)
Open pit.....	-	3	3	BB	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	BB	(D)

[1]Some payroll and sales data for small single-unit companies with up to 20 employees (cutoff varied by industry) were obtained from administrative records of other government agencies rather than from census forms. These data were then used in conjunction with industry averages to estimate statistics shown for these small establishments. This technique was also used for a small number of other establishments whose reports were not received at time data were tabulated. The following symbols are shown where estimated data based on administrative-record data account for 10 percent or more of figures shown: E1--10 to 19 percent; E2--20 to 29 percent; E3--30 to 39 percent; E4--40 to 49 percent; E5--50 to 59 percent; E6--60 to 69 percent; E7--70 to 79 percent; E8--80 to 89 percent; E9--90 percent or more.

[2]All data lines with less than 100 employees are not shown. Some statistics are withheld to avoid disclosing data for individual companies. If employment is 100 or more, number of establishments is shown and employment size range is indicated by one of the following symbols: AA--100 to 249 employees; BB--250 to 499 employees; CC--500 to 999 employees; EE--1,000 to 2,499 employees; FF--2,500 employees or more.

[3]Includes data for separately operated auxiliary establishments which were not classified by type of operation.

Table 3. Products or Services for Selected States: 1982 and 1977

(Includes quantity and value of products of this industry produced by (1) establishments classified in this industry (primary) and (2) establishments classified in other industries (secondary). Transfers of products of this industry from one establishment of a company to another establishment of the same company (interplant transfers) are also included. For meaning of abbreviations and symbols, see introductory text. For explanation of terms, see appendix)

Product code	Geographic area and product	1982			1977		
		Quantity of production for all purposes	Product shipments		Quantity of production for all pruposes	Product shipments	
			Quantity	Value (million dollars)		Quantity	Value (million dollars)
	BARITE						
	United States						
1472- --	Barite	(X)	(X)	93.9	(X)	(X)	57.7
14721 00	Crude barite[1] 1,000 s. tons	3 112.0	1 027.0	12.7	1 894.6	184.3	7.7
14722 00	Prepared barite (crushed or ground, including flotation concentrates)[2] do.	1 466.1	1 434.0	75.9	980.7	978.2	44.5
14720 00	Barite, n.s.k.[3]	(X)	(X)	5.4	(X)	(X)	5.4
	FLUORSPAR						
	United States						
1473- --	Fluorspar	(X)	(X)	18.3	(X)	(X)	32.9
14731 01	Crude fluorspar 1,000 s. tons	(NA)	(NA)	(D)	(NA)	30.6	1.7
14732 01	Prepared fluorspar (crushed or ground, including flotation concentrates) do.	92.0	93.2	17.4	390.7	384.6	28.9
14730 00	Fluorspar, n.s.k.[3]	(X)	(X)	(D)	(X)	(X)	2.4
	POTASH, SODA, AND BORATE MINERALS						
	United States						
1474- --	Potash, soda, and borate minerals	(X)	(X)	1 239.9	(X)	(X)	808.8
14741 00	Crude potassium salts mined 1,000 s. tons	[4]18 646.2	-	-	[4]19 666.4	-	-
14742 00	Processed or refined potassium salts do.	3 904.4	3 830.6	267.9	5 005.9	4 914.4	206.4
14743 01	Sodium carbonates (natural) do.	(X)	6 953.9	567.1	(X)	6 170.1	343.2
14743 03	Sodium sulfate (natural) do.	(X)	1 726.6	402.5	(X)	(D)	(D)
14744 00	Boron compounds do.				(X)	1 611.5	227.0
14740 00	Potash, soda, and borate minerals, n.s.k.[5]	(X)	(X)	2.3	(X)	(X)	(D)
	New Mexico						
1474- --	Potash, soda, and borate minerals	(X)	(X)	203.4	(X)	(X)	(NA)
14741 00	Crude potassium salts mined 1,000 s. tons	17 299.7	-	-	(NA)	-	-
14742 00	Processed or refined potassium salts do.	3 242.5	3 173.8	203.4	(NA)	(NA)	(NA)
	PHOSPHATE ROCK						
	United States						
1475- --	Phosphate rock	(X)	(X)	1 050.1	(X)	(X)	729.2
	Net shipments of phosphate rock[6] mil. dry s. tons	(X)	35.4	811.7	(X)	43.4	622.2
14751 01	Crude phosphate rock (ore or matrix) do.	112.6	(D)	(D)	166.2	(D)	(D)
14751 03	Shipped to washer and concentrator do.	(X)	3.1	9.1	(X)	-	-
14751 05	All other shipments do.	(X)	(D)	(D)	(X)	(D)	(D)
14752 01	Washed and concentrated phosphate rock do.	36.5	20.6	468.3	47.4	21.2	195.3
14752 03	Shipped to preparation plant do.	(X)	9.7	227.2	(X)	11.7	99.6
14752 05	All other shipments do.	(X)	10.9	241.1	(X)	9.5	95.7
14752 06	Dried phosphate rock do.	18.3	17.3	368.2	30.8	29.2	430.4
14752 08	Calcined, sintered, or nodulized phosphate rock do.	(D)	(D)	(D)	(D)	(D)	(D)
14750 00	Phosphate rock, n.s.k.[5]	(X)	(X)	2.1	(X)	(X)	7.4

See footnotes at end of table.

Table 3. **Products or Services for Selected States: 1982 and 1977** – Con.

(Includes quantity and value of products of this industry produced by (1) establishments classified in this industry (primary) and (2) establishments classified in other industries (secondary). Transfers of products of this industry from one establishment of a company to another establishment of the same company (interplant transfers) are also included. For meaning of abbreviations and symbols, see introductory text. For explanation of terms, see appendix)

Product code	Geographic area and product	1982			1977		
		Quantity of production for all purposes	Product shipments		Quantity of production for all purposes	Product shipments	
			Quantity	Value (million dollars)		Quantity	Value (million dollars)
	ROCK SALT						
	United States						
14760 00	Rock salt[7]....1,000 s. tons..	(X)	13 065.0	174.2	(X)	17 793.5	161.0
	New York						
14760 00	Rock salt....1,000 s. tons..	(X)	5 140.7	67.9	(X)	(NA)	(NA)
	SULFUR						
	United States						
14770 00	Sulfur....1,000 l. tons..	4 168.6	4 147.6	432.7	5 846.5	5 588.3	324.0
	CHEMICAL FERTILIZER MINING, N.E.C.						
	United States						
14790 00	Chemical fertilizer mining, n.e.c.[8]....	(X)	(X)	45.1	(X)	(X)	[9]10.4

[1]Includes value for small companies (estimates were made from administrative-record data rather than collected from respondents).
[2]Represents prepared barite produced in all mineral industries, but excludes any of the products shipped by manufacturing industries.
[3]Represents value for establishments that did not report detailed data.
[4]Represents production from underground mines only. Does not include production from well brines or dry lake brines; only shipments were reported for such operations.
[5]Includes value for establishments that did not report detailed data and estimates for small companies (estimates were made from administrative-record data rather than collected from respondents).
[6]Represents all other shipments of crude, washed and concentrated phosphate rock plus shipments of dried and calcined, sintered, or nodulized phosphate rock. Data for phosphate rock, n.s.k., are excluded from this figure.
[7]Includes some rock salt shipped as brine.
[8]Represents pyrites and such other miscellaneous chemical and fertilizer minerals as spodumene, lithium carbonate, wollastonite and natural wollastonite, and natural iron oxide pigments.
[9]Represents net shipments obtained by subtracting minerals received for preparation from gross shipments.

Table 4a. Selected Supplies, Minerals Received for Preparation, and Purchased Machinery Installed: 1982 and 1977

(Includes quantity and cost of materials consumed or put into production by establishments classified only in this industry. For meaning of abbreviations and symbols, see introductory text. For explanation of terms, see appendix)

Supply code	Industry and supply consumed	1982		1977	
		Quantity	Delivered cost (million dollars)	Quantity	Delivered cost (million dollars)
	INDUSTRY 1472, BARITE				
	Selected supplies used, minerals received for preparation, and purchased machinery installed.....	(X)	43.9	(X)	8.9
	Minerals or ores for preparation:				
147091	Crude minerals received for preparation...mil. s. tons..	(D)	(D)	-	-
147091	Crude minerals mined and prepared at same establishment.....do..	2.1	(X)	1.6	(X)
353020	Purchased machinery installed, including mobile loading and transportation equipment.....	(X)	23.2	(X)	2.6
353030	Parts and attachments (except those listed elsewhere) for construction, mining, and conveying equipment; and for preparation machinery.....	(X)	.9		
	Supplies used:				
289210	Explosive materials (including ammonium nitrate) and blasting accessories.....	(X)	(D)	(X)	-
331201	Steel mill shapes and forms (such as plates, sheets, roof bolts, bars, rails, wheels, pipe, tubing, wire products, and structural shapes).....	(X)	(D)	(X)	(D)
970099	All other supplies.....	(X)	7.1	(X)	4.6
974000	Undistributed--minerals, purchased machinery, parts, attachments, and supplies used[1].....	(X)	(D)	(X)	(D)
	INDUSTRY 1473, FLUORSPAR				
	Selected supplies used, minerals received for preparation, and purchased machinery installed.....	(X)	8.9	(X)	16.9
	Minerals or ores for preparation:				
147091	Crude minerals received for preparation...mil. s. tons..	(D)	(D)	.2	10.5
147091	Crude minerals mined and prepared at same establishment.....do..	(D)	(X)	(D)	(X)
353020	Purchased machinery installed, including mobile loading and transportation equipment.....	(X)	(D)	(X)	1.2
353030	Parts and attachments (except those listed elsewhere) for construction, mining, and conveying equipment; and for preparation machinery.....	(X)	(D)		
	Supplies used:				
289210	Explosive materials (including ammonium nitrate) and blasting accessories.....	(X)	(D)	(X)	(D)
331201	Steel mill shapes and forms (such as plates, sheets, roof bolts, bars, rails, wheels, pipe, tubing, wire products, and structural shapes).....	(X)	(D)	(X)	(D)
970099	All other supplies.....	(X)	.6	(X)	2.7
974000	Undistributed--minerals, purchased machinery, parts, attachments, and supplies used[1].....	(X)	(D)	(X)	1.3
	INDUSTRY 1474, POTASH, SODA, AND BORATE MINERALS				
	Selected supplies used, minerals received for preparation, and purchased machinery installed.....	(X)	306.5	(X)	278.4
	Minerals or ores for preparation:				
147091	Crude minerals received for preparation...mil. s. tons..	.4	27.5	.2	9.9
147091	Crude minerals mined and prepared at same establishment.....do..	(X)	(X)	(X)	(X)
353020	Purchased machinery installed, including mobile loading and transportation equipment.....	(X)	113.2	(X)	171.0
353030	Parts and attachments (except those listed elsewhere) for construction, mining, and conveying equipment; and for preparation machinery.....	(X)	57.0		
	Supplies used:				
289210	Explosive materials (including ammonium nitrate) and blasting accessories.....	(X)	3.9	(X)	3.6
331201	Steel mill shapes and forms (such as plates, sheets, roof bolts, bars, rails, wheels, pipe, tubing, wire products, and structural shapes).....	(X)	13.5	(X)	16.4
970099	All other supplies.....	(X)	90.1	(X)	76.3
974000	Undistributed--minerals, purchased machinery, parts, attachments, and supplies used[1].....	(X)	1.3	(X)	1.2

See footnotes at end of table.

Table 4a. Selected Supplies, Minerals Received for Preparation, and Purchased Machinery Installed: 1982 and 1977 – Con.

(Includes quantity and cost of materials consumed or put into production by establishments classified only in this industry. For meaning of abbreviations and symbols, see introductory text. For explanation of terms, see appendix)

Supply code	Industry and supply consumed	1982		1977	
		Quantity	Delivered cost (million dollars)	Quantity	Delivered cost (million dollars)
	INDUSTRY 1475, PHOSPHATE ROCK				
	Selected supplies used, minerals received for preparation, and purchased machinery installed.....	(X)	305.6	(X)	223.1
	Minerals or ores for preparation:				
147091	Crude minerals received for preparation...mil. s. tons..	2.8	67.8	11.4	90.6
147091	Crude minerals mined and prepared at same establishment.....do..	110.7	(X)	166.4	(X)
353020	Purchased machinery installed, including mobile loading and transportation equipment.....	(X)	94.3	(X)	54.2
353030	Parts and attachments (except those listed elsewhere) for construction, mining, and conveying equipment; and for preparation machinery.....	(X)	29.5		
	Supplies used:				
289210	Explosive materials (including ammonium nitrate) and blasting accessories.....	(X)	1.7	(X)	.9
331201	Steel mill shapes and forms (such as plates, sheets, roof bolts, bars, rails, wheels, pipe, tubing, wire products, and structural shapes).....	(X)	37.2	(X)	13.4
970099	All other supplies.....	(X)	74.7	(X)	49.7
974000	Undistributed--minerals, purchased machinery, parts, attachments, and supplies used[1].....	(X)	.4	(X)	14.3
	INDUSTRY 1476, ROCK SALT				
	Selected supplies used, minerals received for preparation, and purchased machinery installed.....	(X)	31.0	(X)	25.7
	Mineral or ores for preparation:				
147091	Crude minerals received for preparation...mil. s. tons..	(D)	(D)	-	-
147091	Crude minerals mined and prepared at same establishment.....do..	10.5	(X)	14.6	(X)
353020	Purchased machinery installed, including mobile loading and transportation equipment.....	(X)	(D)	(X)	16.0
353030	Parts and attachments (except those listed elsewhere) for construction, mining, and conveying equipment; and for preparation machinery.....	(X)	3.2		
	Supplies used:				
289210	Explosive materials (including ammonium nitrate) and blasting accessories.....	(X)	3.6	(X)	2.5
331201	Steel mill shapes and forms (such as plates, sheets, roof bolts, bars, rails, wheels, pipe, tubing, wire products, and structural shapes).....	(X)	(D)	(X)	1.3
970099	All other supplies.....	(X)	10.2	(X)	4.9
974000	Undistributed--minerals, purchased machinery, parts, attachments, and supplies used[1].....	(X)	.8	(X)	1.0
	INDUSTRY 1477, SULFUR				
	Selected supplies used, minerals received for preparation, and purchased machinery installed.....	(X)	42.9	(X)	29.3
	Minerals or ores for preparation:				
147091	Crude minerals received for preparation...mil. s. tons..	-	-	-	-
147091	Crude minerals mined and prepared at same establishment.....do..	(X)	(X)	-	(X)
353020	Purchased machinery installed, including mobile loading and transportation equipment.....	(X)	7.2	(X)	(D)
353030	Parts and attachments (except those listed elsewhere) for construction, mining, and conveying equipment; and for preparation machinery.....	(X)	8.6		
	Supplies used:				
289210	Explosive materials (including ammonium nitrate) and blasting accessories.....	(X)	-	(X)	-
331201	Steel mill shapes and forms (such as plates, sheets, roof bolts, bars, rails, wheels, pipe, tubing, wire products, and structural shapes).....	(X)	10.3	(X)	7.9
970099	All other supplies.....	(X)	(D)	(X)	(D)
974000	Undistributed--minerals, purchased machinery, parts, attachments, and supplies used[1].....	(X)	(D)	(X)	(Z)

See footnotes at end of table.

Table 4a. Selected Supplies, Minerals Received for Preparation, and Purchased Machinery Installed: 1982 and 1977—Con.

(Includes quantity and cost of materials consumed or put into production by establishments classified only in this industry. For meaning of abbreviations and symbols, see introductory text. For explanation of terms, see appendix)

Supply code	Industry and supply consumed	1982		1977	
		Quantity	Delivered cost (million dollars)	Quantity	Delivered cost (million dollars)
	INDUSTRY 1479, CHEMICAL AND FERTILIZER MINERAL MINING, N.E.C.				
	Selected supplies used, minerals received for preparation, and purchased machinery installed.....	(X)	19.2	(X)	8.8
	Minerals or ores for preparation:				
147091	Crude minerals received for preparation...mil. s. tons..	(D)	(D)	(NA)	(NA)
147091	Crude minerals mined and prepared at same establishment.....do..	(D)	(X)	(NA)	(X)
353020	Purchased machinery installed, including mobile loading and transportation equipment.....	(X)	(D)	(X)	(NA)
353030	Parts and attachments (except those listed elsewhere) for construction, mining, and conveying equipment; and for preparation machinery.....	(X)	(D)	(X)	(NA)
	Supplies used:				
289210	Explosive materials (including ammonium nitrate) and blasting accessories.....	(X)	(D)	(X)	(NA)
331201	Steel mill shapes and forms (such as plates, sheets, roof bolts, bars, rails, wheels, pipe, tubing, wire products, and structural shapes).....	(X)	(D)	(X)	(NA)
970099	All other supplies.....	(X)	(D)	(X)	(NA)
974000	Undistributed--minerals, purchased machinery, parts, attachments, and supplies used[1].....	(X)	4.8	(X)	(NA)

[1]Represents cost for establishments that did not report detailed data, including establishments that were not mailed a form.

Table 4b. Fuels Consumed by Type, 1982 and 1977, and End-of-Year Fuel Stocks, 1982

(For meaning of abbreviations and symbols, see introductory text. For explanation of terms, see appendix)

Fuel code	Industry and fuel consumed	1982 consumption		1982 end-of-year stocks[1] (quantity)	1977 consumption	
		Quantity	Delivered cost (million dollars)		Quantity	Delivered cost (million dollars)
	INDUSTRY 1472, BARITE					
	Fuels used.....	(X)	3.3	(X)	(X)	1.0
121005	Coal--bituminous, lignite, and anthracite.....1,000 s. tons..	-	-	-	-	-
	Fuel oil:					
291141	Distillate (light) grade numbers 1, 2, 4, and light diesel fuel.....1,000 bbl..	49.3	1.9	2.0	12.7	.2
291151	Residual (heavy) grade numbers 5 and 6 and heavy diesel fuel.....1,000 bbl..				(D)	(Z)
131157	Gas--natural, manufactured, and mixed.....bil. cu. ft..	(D)	(D)	(X)	.1	.3
291111	Gasoline.....mil. gal..	1.0	.9	(D)	.2	.1
960018	Other fuels--liquefied petroleum gas, coke, wood, and other.....	(X)	(D)	(X)	(X)	(Z)
977000	Undistributed fuels[2].....	(X)	.3	(X)	(X)	.3
	INDUSTRY 1473, FLUORSPAR					
	Fuels used.....	(X)	.9	(X)	(X)	1.5
121005	Coal--bituminous, lignite, and anthracite.....1,000 s. tons..	-	-	-	-	-
	Fuel oil:					
291141	Distillate (light) grade numbers 1, 2, 4, and light diesel fuel.....1,000 bbl..	(D)	(D)	(D)	(D)	(D)
291151	Residual (heavy) grade numbers 5 and 6 and heavy diesel fuel.....1,000 bbl..	-	-	-	(Z)	(Z)
131157	Gas--natural, manufactured, and mixed.....bil. cu. ft..	.3	.7	(X)	(D)	(D)
291111	Gasoline.....mil. gal..	(D)	(D)	(D)	(Z)	(Z)
960018	Other fuels--liquefied petroleum gas, coke, wood, and other.....	(X)	(D)	(X)	(X)	(Z)
977000	Undistributed fuels[2].....	(X)	(D)	(X)	(X)	.5

See footnotes at end of table.

Table 4b. Fuels Consumed by Type, 1982 and 1977, and End-of-Year Fuel Stocks, 1982—Con.

(For meaning of abbreviations and symbols, see introductory text. For explanation of terms, see appendix)

Fuel code	Industry and fuel consumed	1982 consumption		1982 end-of-year stocks[1] (quantity)	1977 consumption	
		Quantity	Delivered cost (million dollars)		Quantity	Delivered cost (million dollars)
	INDUSTRY 1474, POTASH, SODA, AND BORATE MINERALS					
	Fuels used	(X)	185.0	(X)	(X)	106.4
121005	Coal--bituminous, lignite, and anthracite, 1,000 s. tons	(D)	(D)	(D)	(D)	(D)
	Fuel oil:					
291141	Distillate (light) grade numbers 1, 2, 4, and light diesel fuel, 1,000 bbl	109.7	3.7	11.5	230.1	3.3
291151	Residual (heavy) grade numbers 5 and 6 and heavy diesel fuel, 1,000 bbl	153.8	5.0	(D)	(D)	(D)
131157	Gas--natural, manufactured, and mixed, bil. cu. ft.	36.4	117.5	(X)	50.0	80.6
291111	Gasoline, mil. gal.	1.7	1.9	.1	1.2	.7
960018	Other fuels--liquefied petroleum gas, coke, wood, and other	(X)	(D)	(X)	(X)	.1
977000	Undistributed fuels[2]	(X)	.3	(X)	(X)	(D)
	INDUSTRY 1475, PHOSPHATE ROCK					
	Fuels used	(X)	54.1	(X)	(X)	38.5
121005	Coal--bituminous, lignite, and anthracite, 1,000 s. tons	(D)	(D)	(D)	(D)	(D)
	Fuel oil:					
291141	Distillate (light) grade numbers 1, 2, 4, and light diesel fuel, 1,000 bbl	227.2	9.8	28.2	287.3	4.8
291151	Residual (heavy) grade numbers 5 and 6 and heavy diesel fuel, 1,000 bbl	660.6	18.2	80.7	1 532.8	21.5
131157	Gas--natural, manufactured, and mixed, bil. cu. ft.	5.1	19.7	(X)	7.3	6.5
291111	Gasoline, mil. gal.	1.8	2.1	.4	(D)	(D)
960018	Other fuels--liquefied petroleum gas, coke, wood, and other	(X)	(D)	(X)	(X)	.2
977000	Undistributed fuels[2]	(X)	.1	(X)	(X)	.7
	INDUSTRY 1476, ROCK SALT					
	Fuels used	(X)	6.8	(X)	(X)	2.9
121005	Coal--bituminous, lignite, and anthracite, 1,000 s. tons	-	-	-	-	-
	Fuel oil:					
291141	Distillate (light) grade numbers 1, 2, 4, and light diesel fuel, 1,000 bbl	(D)	(D)	(D)	59.6	.9
291151	Residual (heavy) grade numbers 5 and 6 and heavy diesel fuel, 1,000 bbl	(D)	(D)	(D)	(D)	(D)
131157	Gas--natural, manufactured, and mixed, bil. cu. ft.	(D)	(D)	(X)	1.7	1.2
291111	Gasoline, mil. gal.	(D)	(D)	(D)	.1	(Z)
960018	Other fuels--liquefied petroleum gas, coke, wood, and other	(X)	(D)	(X)	(X)	(D)
977000	Undistributed fuels[2]	(X)	.2	(X)	(X)	.4
	INDUSTRY 1477, SULFUR					
	Fuels used	(X)	99.2	(X)	(X)	65.0
121005	Coal--bituminous, lignite, and anthracite, 1,000 s. tons	-	-	-	-	-
	Fuel oil:					
291141	Distillate (light) grade numbers 1, 2, 4, and light diesel fuel, 1,000 bbl	30.9	1.0	(D)	27.3	.4
291151	Residual (heavy) grade numbers 5 and 6 and heavy diesel fuel, 1,000 bbl				(D)	(Z)
131157	Gas--natural, manufactured, and mixed, bil. cu. ft.	29.6	97.6	(X)	43.2	64.2
291111	Gasoline, mil. gal.	(D)	(D)	(D)	.4	.2
960018	Other fuels--liquefied petroleum gas, coke, wood, and other	(X)	(D)	(X)	(X)	(Z)
977000	Undistributed fuels[2]	(X)	(D)	(X)	(X)	(Z)

See footnotes at end of table.

Table 4b. Fuels Consumed by Type, 1982 and 1977, and End-of-Year Fuel Stocks, 1982 – Con.

(For meaning of abbreviations and symbols, see introductory text. For explanation of terms, see appendix)

Fuel code	Industry and fuel consumed	1982 consumption		1982 end-of-year stocks[1] (quantity)	1977 consumption	
		Quantity	Delivered cost (million dollars)		Quantity	Delivered cost (million dollars)
	INDUSTRY 1479, CHEMICAL AND FERTILIZER MINERAL MINING, N.E.C.					
	Fuels used	(X)	3.0	(X)	(X)	1.5
121005	Coal--bituminous, lignite, and anthracite, 1,000 s. tons	-	-	-	-	-
	Fuel oil:					
291141	Distillate (light) grade numbers 1, 2, 4, and light diesel fuel, 1,000 bbl	(D)	(D)	(D)	(D)	(D)
291151	Residual (heavy) grade numbers 5 and 6 and heavy diesel fuel, 1,000 bbl	(D)	(D)	(D)	(D)	(D)
131157	Gas--natural, manufactured, and mixed, bil. cu. ft.	(D)	(D)	(X)	(D)	(D)
291111	Gasoline, mil. gal.	(Z)	(Z)	(D)	-	-
960018	Other fuels--liquefied petroleum gas, coke, wood, and other	(X)	(D)	(X)	(X)	-
977000	Undistributed fuels[2]	(X)	(D)	(X)	(X)	-

[1]Fuel stocks were collected for the first time in 1982.
[2]Represents cost for establishments that did not report detailed data, including establishments that were not mailed a form.

APPENDIX

Scope and Coverage and Explanation of Terms

SCOPE AND COVERAGE

Establishment Basis of Reporting

The census of mineral industries covers each mining establishment of firms with one paid employee or more operating in the United States. A firm operating more than one establishment is required to file a separate report for each location. Companies engaged in distinctly different lines of activity at one location are asked to submit separate reports if records permit such a separation and the activities are of significant size.

Statistics for employment and payroll for individual industries and industry groups also include employment and payroll figures for administrative offices, warehouses, storage facilities, and other auxiliary establishments servicing mining establishments. Respondents were asked to file separate reports for any separately operated auxiliary establishments. Classification of employment and payroll data at such auxiliary establishments was based on the mining establishments served.

For oil and gas field operations and for contract services, the basis for reporting was different from the "establishment" basis used for other types of mining. Firms operating oil and gas wells, drilling wells, or exploring for oil and gas for their own account, were required to submit a separate report for each State or offshore area adjacent to a State in which it conducted such activities and to include employment, production, and capital expenditures data at the county level. Firms which supplied contract services for oil and gas field operations or for mining establishments were required to submit one report covering all such activities in the United States and to include information on receipts for services by State and county. These consolidated reports were then allocated to county establishments based on the data reported at the county level.

Use of Administrative Records

From a mailout universe of 36,000 mining establishments, approximately 11,000 small single establishment companies were not mailed a questionnaire. For these establishments, some employment, payroll, and receipts data were obtained from the administrative records of other agencies. Selection of the small establishment nonmail cases was done on an industry-by-industry basis, and a variable cutoff was used to determine those establishments for which administrative records were to be used in place of a census report. This information was then used in conjunction with industry averages to estimate the statistics for administrative-record and nonresponse establishments. The value of shipments and receipts and cost of supplies were not distributed among specific products and supplies for these establishments, but were included in the product and supply "not specified by kind" categories. Overall, establishments for which administrative-record data were used accounted for less than 3 percent of total value of shipments.

Value of Shipments and Receipts for the Industry Compared to Value of Product Shipments

Figures for value of shipments and receipts represent the total shipments and receipts for all establishments classified in this industry and include products primary to the industry, products classified as primary in other industries but secondary to this industry, and miscellaneous receipts (repair work, sale of scrap, research and development, installation receipts, and resales). Value of product shipments represents products classified as primary to this industry that were shipped by all mining and manufacturing establishments, regardless of their industry classification.

EXPLANATION OF TERMS

All employees—This item includes all full-time and part-time employees on the payrolls of operating mineral establishments for any part of the pay period including the 12th of the months specified on the report form. Included are all persons on paid sick leave, paid holidays, and paid vacation during these pay periods. Officers of the corporations are included as employees; proprietors and partners of unincorporated firms are excluded. The "all employee" number is the average number of production workers plus the number of other employees in mid-March. The number of production workers is the average of those for the midmonth payroll periods of March, May, August, and November.

Payroll—This item includes all forms of compensation; such as salaries, wages, commissions, dismissal pay, bonuses, vacation and sick leave pay, and compensation in kind, prior to such deductions as employees' Social Security contributions, withholding taxes, group insurance, union dues, and savings bonds. The total includes salaries of officers of these establishments, if it is a corporation; it excludes payments to the proprietor or partners, if it is an unincorporated concern. Respondents were told that in reporting they could follow the definition of payroll used for calculating the Federal withholding tax.

Production-, development-, and exploration-worker hours—This item represents all hours that production, development, and exploration workers worked both on active days during which there was production or development work and on inactive days when only guards, inspectors, repairpersons, and other maintenance persons were on duty. It includes all hours worked or paid for at the mining operations, except hours for paid vacations, holidays, or sick leave, when the employee was not at the establishment. Included are actual overtime hours, not straight-time equivalent hours. Hours of working proprietors or partners are excluded.

Cost of supplies used, purchased machinery installed, etc.—This cost includes supplies, minerals received for preparation, and purchased machinery installed, fuels and electric energy used, contract work done by others, and cost of products bought and resold without further processing. It includes charges to both the current and capital accounts. It also includes the cost of items used during 1982, whether they were purchased, withdrawn from inventories, or received from other establishments of the company. Supplies and equipment used in mine development, plant expansion, and capitalized repairs, which are chargeable to fixed assets accounts, were included, as were supplies furnished without charge to contractors for

use at the mining operation and supplies sold to employees for use at the establishment. No data on such costs as advertising, insurance, telephone, and research and consulting services of other establishments; or on overhead costs, such as depreciation charges, rent, interest, and royalties were included in this item. For selected supplies and fuels and for electric energy, both quantity and cost data were requested. The cost data refer to direct charges actually paid or payable (after discounts) for items used during the year. Freight charges and other direct charges, incurred by the establishment in acquiring the item, are included. Where the company's records did not show actual amounts used, they were asked to approximate use by adding purchases (or receipts) during the year to beginning inventory and subtracting ending inventory.

Specific supplies used and minerals prepared—In addition to the total cost of supplies used and purchased machinery installed, etc., which every establishment was required to report, information was also collected on the consumption of major supplies used in mining. These inquiries were restricted to supplies which were important parts of the cost of production, exploration, and development of a particular industry and for which cost information was available from the firms' records.

On report forms for almost all mineral industries, except the contract services industries, a uniform inquiry was included on minerals prepared at the reported establishments. Figures were obtained on minerals prepared from three sources: (1) crude minerals mined at the establishment (quantity); (2) crude minerals received from others (quantity and cost); and (3) crude minerals received for preparation on a custom or toll basis (quantity and estimated value).

Establishments consuming less than a specified amount (usually $25,000) were not requested to report separately the cost of a supply. Also, the cost of supplies for small establishments for which administrative records were used was estimated as "not specified by kind."

Specific fuels used and stocks on hand—This item includes the quantity and cost of fuels used in mining. For most industries, every establishment was required to report separate quantity and cost figures for purchased coal, distillate fuel oil, residual fuel oil, gas, and gasoline, and a cost figure for "other fuels," as shown in table 4b. The cost of fuels for small establishments for which administrative records were used were imputed as "not specified by kind."

In addition, figures for stocks of purchased fuels on hand at the end of the year were reported for the first time in 1982. Every establishment was required to report the total quantity of unexpended fuel it had on hand, including emergency reserves, at the end of the year. Excluded are fuels to be used as feedstocks or raw materials.

Value added by mining—This measure of mining activity is derived by subtracting the total cost of supplies used, purchased machinery installed, etc., from the sum of the value of shipments and receipts (mining products plus receipts for services rendered) and total capital expenditures.

This statistic avoids the duplication in value of shipments and receipts, which results from the use of products of some establishments as supplies, energy sources, or materials by others. Moreover, it provides a measure of value added, not only in mineral production, but also in the development of mineral properties. For these reasons, it is considered to be the best value measure for comparing the relative economic importance of mining among industries and geographic areas.

Value of shipments and [illegible] values, f.o.b. mine, well, or plant [illegible] taxes), of all primary and secondary products shipped, as well as all miscellaneous receipts such as receipts for contract work performed for others, installation and repair, sale of scrap, and sale of products bought and resold without further processing. Included are all items produced by the establishments and sold, transferred to other plants of the same company, or shipped on consignment.

In the case of multiunit companies, the firm was requested to report the value of products transferred to other establishments of the same company at full economic or commercial value; i.e., including not only the direct costs of production, but also a reasonable proportion of "all other costs" (including company overhead) and profit.

For industry and industry group totals, some duplication is introduced by the inclusion of materials transferred from one establishment to another for mineral preparation. Wherever value of shipments and receipts is shown without further specification, it represents gross shipments.

Shipments of individual products—In the 1982 Census of Mineral Industries, information was collected on the output of about 200 individual mineral product items. In general, the figures of the 1982 and 1977 mineral censuses were confined to separate totals for each crude and each prepared mineral. Where significant, separate shipments figures were also obtained for crude minerals going to preparation plants and those going to consumers.

Figures were collected on both quantity and value of shipments. Shipments included commercial shipments and transfers of products to other operations of the same company. For products which are used to a significant extent within the same establishment for power or heat, and for minerals mined and prepared in the same establishment, total production or separate data on production for such uses were collected. Typically, production was also collected for products for which there are usually significant differences between the total production and total shipments as a result of stock changes.

For service industries, the amount received or due for services performed during 1982 was collected as a measure of output. For mine operators who also perform services, the amount received for such services was added to the total value of products shipped to determine total value of shipments and receipts for each establishment.

Capital expenditures—This item covers expenditures made during the year for development and exploration of mineral properties, for construction, and for purchased machinery chargeable to fixed assets accounts of the mineral establishment. They are the type for which depreciation, depletion, or Office of Minerals Exploration accounts are ordinarily maintained. Capital expenditures during 1982 were to be determined as "additions completed during the year plus construction in progress at the end of the year minus construction in progress at the beginning of the year." Reported capital expenditures were to include work done by contract, as well as by the mine forces. Expenditures for machinery and equipment were to include those made for replacement purposes, as well as those for additions to capacity. Excluded from these expenditures were costs of maintenance and repairs charged as current operating expense and expenditures for land and mineral rights.